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MICROSOFT CORPORATION
ATTN: PATENT GROUP DOCKETING DEPARTMENT
ONE MICROSOFT WAY
REDMOND, WA 98052-6399

EXAMINER

LESNIEWSKI, VICTOR D

ART UNIT PAPER NUMBER

2152

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/840,588	Applicant(s) WANG, GANG	
	Examiner Victor Lesniewski	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 28-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 9/12/2005 has been placed of record in the file.
2. Claims 1, 6, 16, 19, 28, 34, and 35 have been amended.
3. The rejection of claims 1-15, 19-25, and 28-35 under 35 U.S.C. 112 are withdrawn in view of the amendment.
4. The rejection of claims 34 and 35 under 35 U.S.C. 101 are withdrawn in view of the amendment.
5. Claims 1-25 and 28-35 are now pending.
6. The applicant's arguments with respect to claims 1-25 and 28-35 have been considered but are moot in view of the following new grounds of rejection.

Continued Examination Under 37 CFR 1.114

7. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous office action has been withdrawn pursuant to 37 CFR 1.114. The applicant's submission filed on 9/12/2005 has been entered.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-15, 19-25, and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonnell et al. (U.S. Patent Number 5,655,081), hereinafter referred to as Bonnell, in view of Gajda et al. (U.S. Patent Number 6,502,088), hereinafter referred to as Gajda.

10. Bonnell disclosed a system for monitoring and managing computer resources and applications across a network using at least one manager software system and a plurality of agent software systems running on server computers. In an analogous art, Gajda disclosed a system for improved access to databases that utilizes a store place data access layer coupled to a server for providing relational features to non-relational data sources.

11. Concerning claims 1, 6, 19, 28, 34, and 35, Bonnell did not explicitly state providing an access point that can be traversed to dynamically discover information that satisfies one or more queries. However Gajda does state this feature as his store place data access layer provides a single access point for data manipulation including query resolution. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Bonnell by adding the ability to provide an access point that can be traversed to dynamically discover information that satisfies one or more queries as provided by Gajda. Here the combination satisfies the need for a solution to the problem of inefficient management of events occurring within a network. See Bonnell, column 6, lines 15-23.

12. Thereby, the combination of Bonnell and Gajda discloses:

- <Claim 1>

Apparatus for monitoring multiple computing devices coupled to a network comprising:

a) a management computing device having software for monitoring multiple monitored

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computing devices that are coupled to a network, said management computing device including an aggregator component that accumulates information regarding the multiple monitored computing devices (Bonnell, figure 1, item 10); b) a video display for displaying a result from the aggregator component (Bonnell, column 2, lines 43-51); c) a plurality of monitored computing devices coupled to the management computing device by means of the network to enable information regarding the monitored computing devices to be determined by the aggregator component of said management computing device (Bonnell, figure 1, item 14 and column 1, lines 54-57); and d) said plurality of monitored computing devices implementing schema for responding to one or more queries by providing the aggregator component with at least one access point, which can be traversed to dynamically discover information about one or more associated computing devices that satisfies the one or more queries, based on one or more query triggering events defined in the schema (Bonnell, figure 3 and column 5, lines 16-23 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59).

- <Claim 2>

The apparatus of claim 1 additionally comprising one or more client computing devices coupled to the management computing device by means of the network and wherein the video display is coupled to one of the client computing devices (Bonnell, column 2, lines 2-5).

- <Claim 3>

The apparatus of claim 1 wherein the schema includes a class hierarchy of managed elements and wherein an access point instance is created for each monitored computing device to provide a means of monitoring managed elements of an associated monitored computing device (Bonnell, column 4, lines 30-56 and column 3, lines 59-63).

- <Claim 4>

The apparatus of claim 3 wherein a web element class is defined that is instantiated to include web elements contained within a monitored computing device (Bonnell, column 4, lines 42-56).

- <Claim 5>

The apparatus of claim 1 wherein each of the monitored computing devices includes a data repository and wherein the schema defines a manner in which data is entered into the data repository when the monitored computing device is added to the network (Bonnell, column 9, line 61 through column 10, line 10).

- <Claim 6>

A method for monitoring and configuring multiple computing devices coupled to a network comprising: a) providing a management computing device having software for monitoring multiple other computing devices, said management computing device including an aggregator component that accumulates information regarding the multiple other computing devices (Bonnell, figure 1, item 10); b) connecting a plurality of other computing devices to the management computing device by means of a network to enable the information regarding the other computing devices to be determined by the

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aggregator component of said management computing device (Bonnell, figure 1, item 14 and column 1, lines 54-57); c) accessing results provided by the aggregator and updating an output for conveying information about the multiple other computing devices based on a result from the aggregator component (Bonnell, column 2, lines 43-51); and d) maintaining a data repository on each of the other computing devices that is based on a monitoring and control schema for providing the aggregator component with at least one access point, which can be traversed to dynamically discover information about one or more associated computing devices that satisfies at least one query, based on one or more query triggering events defined in the monitoring and control schema (Bonnell, column 9, line 61 through column 10, line 10 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59).

- <Claim 7>

The method of claim 6 wherein the monitoring and control schema defines a class hierarchy of elements that depend from a base class and include the access point for examining elements for a given one of said other computing devices (Bonnell, column 4, lines 30-56 and figure 18).

- <Claim 8>

The method of claim 7 wherein the monitoring and control schema defines elements that are associated with other elements by means of a containment association (Bonnell, column 11, lines 2-9).

- <Claim 9>

The method of claim 7 wherein the monitoring and control schema defines elements that are related to each other by events transmitted to the aggregator component by a user interface (Bonnell, column 13, line 63 through column 14, line 12).

- <Claim 10>

The method of claim 9 wherein the events are initiated by a client computing device coupled to the management computing device by means of a network connection (Bonnell, column 13, lines 7-9).

- <Claim 11>

The method of claim 6 wherein the aggregator component accesses, in sequence, multiple other computing devices coupled to the network (Bonnell, column 14, lines 1-7).

- <Claim 12>

The method of claim 6 wherein the monitoring and control schema is a class hierarchy of elements that depend from a base class and wherein the aggregator component associates one or more result elements with an event, and for each of said one or more result elements, the aggregator determines if the result element has an aggregate association with other elements (Bonnell, column 11, lines 23-41 and 56-67).

- <Claim 13>

The method of claim 12 wherein the aggregator component traverses multiple layers of elements to determine aggregate associations between elements (Bonnell, column 11, lines 23-26).

- <Claim 14>

The method of claim 13 wherein for each element the aggregator component obtains data from a data property for that element and uses the data format property of said element to format data from the data property (Bonnell, column 4, lines 4-29).

- <Claim 15>

The method of claim 14 wherein the data property is a SQL string which the management component executes for an associated other computing device on the network (Bonnell, column 4, lines 13-17).

- <Claim 19>

A machine readable medium including instructions stored thereon, which when executed by at least one processing system, causes the at least one processing system to perform a method for monitoring multiple computing devices coupled to a network, said medium including instructions for: a) providing an aggregator component on a management computing device that accumulates information regarding a multiple number of other computing devices (Bonnell, figure 1, item 10); b) obtaining the information regarding the other computing devices for use by the aggregator component of said management computing device (Bonnell, figure 1, item 14 and column 1, lines 54-57); c) updating an output for conveying information about the multiple other computing devices based on a result from the aggregator component (Bonnell, column 2, lines 43-51); and d) said obtaining step performed by instructions that access data from a data repository implemented on the other computing devices that is based on a monitoring and control schema for responding to one or more queries by providing the aggregator component

with at least one access point, which can be traversed to dynamically discover information about one or more associated computing devices that satisfies the one or more queries, based on one or more query triggering events defined in the schema (Bonnell, column 9, line 61 through column 10, line 10 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59).

- <Claim 20>

The machine readable medium of claim 19 wherein the monitoring and control schema defines a class hierarchy of elements that depend from a base class which the aggregator component accesses by means of the access point for examining elements for a given one of said other computing devices (Bonnell, column 4, lines 30-56 and figure 18).

- <Claim 21>

The machine readable medium of claim 20 wherein the monitoring and control schema defines elements that are associated with other elements by means of a containment association (Bonnell, column 11, lines 2-9).

- <Claim 22>

The machine readable medium of claim 20 wherein the monitoring and control schema defines elements that are related to each other by events transmitted to the aggregator component of the management computing device by means of a user interface component of said management computing device (Bonnell, column 13, line 63 through column 14, line 12).

- <Claim 23>

The machine readable medium of claim 19 wherein the aggregator component accesses, in sequence, multiple other computing devices coupled to the network (Bonnell, column 14, lines 1-7).

- <Claim 24>

The machine readable medium of claim 19 wherein the monitoring and control schema is a class hierarchy of elements that depend from a base class and wherein the aggregator component associates one or more result elements with an event, and for each of said one or more result elements, the aggregator determines if the result element has an aggregate association with other elements (Bonnell, column 11, lines 23-41 and 56-67).

- <Claim 25>

The machine readable medium of claim 19 wherein for each element the aggregator component obtains data from a data property for that element and uses the data format property of said element to format data from the data property (Bonnell, column 4, lines 4-29).

- <Claim 28>

A machine readable medium including instructions stored thereon, which when executed by at least one processing system, causes the at least one processing system to perform a method for monitoring multiple computing devices coupled to each other by means of a network, said medium including instructions for: a) monitoring multiple computing devices by providing an aggregator component on a management computing device that accumulates information regarding multiple other computing devices (Bonnell, figure 1,

item 10); b) obtaining the information regarding the other computing devices for use by the aggregator component of said management computing device (Bonnell, figure 1, item 14 and column 1, lines 54-57); c) generating a visual output for conveying information about the multiple other computing devices based on a result from the aggregator component formatted according to data maintained on a data repository implemented on the other computing devices that is based on a monitoring and control schema for responding to at least one query by providing the aggregator component with at least one access point, which can be traversed to dynamically discover the information about the other computing devices that satisfies the at least one query to the aggregator component, based on one or more query triggering events defined in the monitoring and control schema (Bonnell, column 2, lines 43-51 and column 9, line 61 through column 10, line 10 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59); and d) monitoring inputs from a user interface to enable the management computer to update data stored in the data repository of one or more of said other computer devices (Bonnell, column 2, lines 5-16 and column 13, line 63 through column 14, line 12).

- <Claim 29>

The machine readable medium of claim 28 wherein each of the other computing devices includes different types of managed elements and wherein instructions implementing the aggregator component obtains data from a data property for a managed element and uses the data format property of said managed element to format data for presentation on the visual output (Bonnell, column 4, lines 4-29).

- <Claim 30>

The machine readable medium of claim 28 wherein the monitoring and control schema defines a class hierarchy of managed elements that depend from a base class and include the access point and wherein the medium includes instructions enabling the aggregator to examine elements within the hierarchy for a given one of said other computing devices (Bonnell, column 4, lines 30-56 and figure 18).

- <Claim 31>

The machine readable medium of claim 30 wherein the monitoring and control schema defines managed elements that are associated with other managed elements by means of a containment association and wherein the instructions that implement the aggregator component examine in a recursive manner managed elements contained within other managed elements (Bonnell, column 11, lines 2-9 and column 14, lines 1-7).

- <Claim 32>

The machine readable medium of claim 28 wherein the monitoring and control schema stored on the other computing devices defines managed elements that are related to each other by an on event association between managed elements and where an event is initiated at the user interface and evaluated by the aggregator component of said management computing device (Bonnell, column 10, lines 16-38 and column 13, line 63 through column 14, line 12).

- <Claim 33>

The machine readable medium of claim 28 wherein the monitoring and control schema is a class hierarchy of managed elements that depend from a base class and wherein the

aggregator component associates one or more result managed elements with an event, and for each of said one or more result managed elements, the aggregator determines if the result managed element has an aggregate association with other managed elements (Bonnell, column 11, lines 23-41 and 56-67).

- <Claim 34>

At least one network management component embodied in at least one machine-readable medium as one or more instructions stored thereon, which when executed by at least one processing system, monitors at least one network resource component, the at least one network management component comprising: at least one aggregator module that makes at least one query for status information related to the at least one network resource component via at least one access module which is derived from schema implemented by the at least one network resource component, which the at least one aggregator uses to dynamically discover information about one or more associated network resource components to satisfy the at least one query, in response to the schema being made accessible to the at least one aggregator module based on one or more query triggering events (Bonnell, figure 3 and column 5, lines 16-23 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59).

- <Claim 35>

At least one network resource component embodied in at least one machine-readable medium as one or more instructions stored thereon, which when executed by at least one processing system, makes status information related to the at least one network resource component available to at least one network management component, the at least one

network resource component comprising: at least one status module that obtains the status information for satisfying at least one query from the at least one network management component requesting the status information; at least one access module derived from schema implemented by the at least one network component that can be referenced by the at least one network management component for making the at least one query and for dynamically discovering status information related to one or more of either the at least one network resource component or at least another associated network resource component; and at least one query event module derived from the schema implemented by the at least one network management component that can identify any network resource component for which the status information can be made accessible via the at least one access module and that can describe one or more events which trigger the at least one status module to obtain status information for satisfying the at least one query (Bonnell, figure 3 and column 5, lines 16-23 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59).

Since the combination of Bonnell and Gajda discloses all of the above limitations, claims 1-15, 19-25, and 28-35 are rejected.

13. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed et al. (U.S. Patent Number 5,862,325), hereinafter referred to as Reed, in view of Gajda.

14. Reed disclosed a system for transferring metadata between a provider and a consumer computer that results in intelligent processing of information by the consumer computer and combined control by the provider and consumer of the types of content of information

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subsequently transferred. In an analogous art, Gajda disclosed a system for improved access to databases that utilizes a store place data access layer coupled to a server for providing relational features to non-relational data sources.

15. Concerning claim 16, Reed did not explicitly state providing an access point that can be traversed to dynamically discover information that satisfies one or more queries. However Gajda does state this feature as his store place data access layer provides a single access point for data manipulation including query resolution. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Reed by adding the ability to provide an access point that can be traversed to dynamically discover information that satisfies one or more queries as provided by Gajda. Here the combination satisfies the need for increased flexibility and efficiency of access to databases. See Gajda, column 3, lines 20-24.

16. Thereby, the combination of Reed and Gajda discloses:

- <Claim 16>

A machine-readable medium having stored thereon a repository data structure for storing data corresponding to a schema for defining relations between objects of a server computing device coupled by means of a network to a management computing device, said repository data structure derived from a compilation of a managed object format language rendering of the schema, said rendering including: a) a base class of type management element from which a plurality of classes are derived and which provides at least one access point to instances of the derived classes, which can be traversed to dynamically discover information about one or more associated computing devices that satisfies the one or more queries, based on one or more query triggering events defined in

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at least one on event class derived from the base class (Reed, column 17, lines 5-21 and Gajda, column 9, lines 21-46; column 9, line 57 through column 10, line 8; and column 10, lines 52-59); b) a first derived class of the base class being at least two managed elements having one or more attributes comprising a display format attribute defining a manner for presenting information at one or more client devices which is obtained by an aggregator component on the management computing device via the at least one access point and a display name attribute that identifies the information to be presented at the one or more client devices (Reed, column 50, lines 25-46 and column 71, line 59 through column 72, line 21); and c) a second derived class of the base class being the at least one on event class that defines a source and result relationship between the at least two managed elements having at least one particular result object being provided for at least one particular source object based on the aggregator component requesting the information via the at least one access point (Reed, column 41, line 63 through column 42, line 15).

- <Claim 17>

The repository data structure stored on the machine-readable medium of claim 16 additionally comprising a third derived class of the base class being an aggregate class that defines elements having a parent and child relation between instances of the management element type object (Reed, column 39, line 40 through column 40, line 6).

- <Claim 18>

The repository data structure stored on the machine-readable medium of claim 16 wherein the first derived class further includes a datatype field and a data field and

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wherein one type of datatype causes the data in the data field to be interpreted as a SQL statement (Reed, column 71, line 59 through column 72, line 21).

Since the combination of Reed and Gajda discloses all of the above limitations, claims 16-18 are rejected.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

- Bachman (U.S. Patent Number 4,631,664) disclosed a database management system that stores, retrieves, and modifies data records based on partnership sets.
- Bayer (U.S. Patent Number 6,510,435) disclosed a system suitable for online applications for organizing, inserting, deleting, and searching data objects that is designed as a dynamic data structure called an FB tree.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor Lesniewski whose telephone number is 571-272-3987. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VZ

Victor Lesniewski
Patent Examiner
Group Art Unit 2152



BUNJOB JARDENCHONWANIT
PRIMARY EXAMINER